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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/077,650	02/14/2002	Nileshkumar J. Parekh	020129	5504

7590

05/08/2003

QUALCOMM Incorporated  
Attn: Patent Department  
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EXAMINER

JAGANNATHAN, MELANIE

ART UNIT

PAPER NUMBER

2666

5

DATE MAILED: 05/08/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/077,650

Applicant(s)

PAREKH ET AL

Examiner

Melanie Jagannathan

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 14 February 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claims 8-9,11-12,21-29 are rejected under 35 U.S.C. 102(e) as being anticipated by Wang et al. US 6,526,033.

Regarding claims 8-9,11-12,21-26,29, the claimed terminating point-to-point protocol framing from the CDMA and sending IP to GSM core infrastructure in response to selection of IP by user of a CDMA mobile station is anticipated by GSM user mobile device (Figure 3, element 240) roaming in CDMA network (element 200) and the dynamic IP address of home server being relayed to user mobile device during the IP Configuration Protocol phase of Point-to-Point Protocol initialization when a user has logged in. See column 6, lines 1-11. The claimed packet data protocol is disclosed by IP protocol and the claimed specifying of at least

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access point name from GSM HLR is disclosed by user mobile device registered in HLR (Figure 3, element 260). See column 5, lines 12-27.

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims **1-6,14-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Naqvi et al. US 6,545,992 in view of Gorsuch US 6,526,034.

Regarding claims 1-3, 14-17, the claimed first element communicating with CDMA radio access network using CDMA protocol is disclosed by UTRAN comprising node (Figure 1, element 102) and radio network controller (element 104) communicating via radio channel using CDMA protocol. See column 1, lines 25-37 and lines 47-48. The claimed second element communicating with a GSM core infrastructure using GSM protocol, the first and second

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elements communicating with each other, whereby use of the CDMA RAN with the GSM core infrastructure is disclosed by SGSN (element 111) using GSM protocol where there is packet based traffic between the UTRAN and SGSN. See column 1, lines 39-48.

Naqvi et al. does not disclose a switch that interconnects CDMA and GSM infrastructure. Gorsuch discloses a terminal (Figure 6, element 615) that includes a subscriber unit (element 101) with a user who desires to communicate with a second site using a portable computer (element 110). The subscriber unit includes both a CDMA protocol converter (element 130) and a W-LAN protocol converter (element 230). At the time the invention was made it would have been obvious to a person of ordinary skill in the art to modify system of Naqvi et al to have a switch that interconnects two different protocols such CDMA and GSM. One of ordinary skill in the art would be motivated to do this for efficient facilitation of communication between different systems.

Regarding claim 4,18, the claimed SGSN communicating with gateway GPRS service node, GGSN is disclosed by SGSN sending IP packets to GGSN (element 119). See column 2, lines 10-26.

Regarding claim 5, 19, the claimed PDSN element communicating with CDMA base station controller is disclosed by UTRAN communicating with radio network controller. See column 1, lines 25-32.

Regarding claim 6, the claimed transfer of computer data is disclosed by mobile station in communicating a data call over CDMA system.

3. Claims 7,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naqvi et al. in view of Gorsuch in further view of Wang et al. U.S. 6,526,033.

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Regarding claims 7,20, Naqvi et al. discloses all the limitations of the claims except for switch that interconnects CDMA and GSM infrastructure and switch terminating point-to-point protocol framing from the CDMA RAN and sends Internet protocol to the GSM core infrastructure in response to selection of IP by a user of CDMA mobile station communicating with CDMA RAN and initiating packet data protocol including specifying at least one access point name from CDMA mobile station.

Regarding the claimed switch that interconnects CDMA and GSM infrastructure, Gorsuch discloses a terminal (Figure 6, element 615) that includes a subscriber unit (element 101) with a user who desires to communicate with a second site using a portable computer (element 110). The subscriber unit includes both a CDMA protocol converter (element 130) and a W-LAN protocol converter (element 230). At the time the invention was made it would have been obvious to a person of ordinary skill in the art to modify system of Naqvi et al. to have a switch that interconnects two different protocols such CDMA and GSM. One of ordinary skill in the art would be motivated to do this for efficient facilitation of communication between different systems.

Wang et al. discloses GSM subscribers roaming into CDMA networks with user mobile device (Figure 3, element 240) roaming in wireless network (element 200) and the dynamic IP address of home server is relayed to user mobile device during the IP Configuration Protocol phase of Point-to-Point Protocol initialization when a user has logged in. See column 6, lines 1-11. The claimed packet data protocol is disclosed by IP protocol and the claimed specifying of at least access point name from GSM HLR is disclosed by user mobile device registered in HLR (Figure 3, element 260). See column 5, lines 12-27.

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the system of Naqvi et al. with use of point-to-point protocol and IP addressing of Wang et al. between CDMA and GSM systems. One of ordinary skill in the art would be motivated to do this to facilitate data transfer between the CDMA and GSM protocols for proper communication.

4. Claims 10, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. in view of Naqvi et al. and Gorsuch.

Regarding claims 10, 13, Wang et al. discloses all the limitations of the claims except for the claimed switch having a packet data serving node communicating with CDMA radio access network using CDMA protocol and SGSN communicating with a GSM core infrastructure using GSM protocol, the elements communicating with each other, whereby use of the CDMA RAN with the GSM core infrastructure.

The claimed PDSN communicating with CDMA radio access network using CDMA protocol is disclosed by Naqvi et al. by UTRAN comprising node (Figure 1, element 102) and radio network controller (element 104) communicating via radio channel using CDMA protocol. See column 1, lines 25-37 and lines 47-48. The claimed second element communicating with a GSM core infrastructure using GSM protocol, the first and second elements communicating with each other, whereby use of the CDMA RAN with the GSM core infrastructure is disclosed by Naqvi et al. by SGSN (element 111) using GSM protocol where there is packet based traffic between the UTRAN and SGSN. See column 1, lines 39-48.

At the time the invention was made it would have been obvious to a person of ordinary skill in the art to modify the use of point-to-point protocol and IP addressing in system Wang et

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al system of Wang et al with system of Naqvi et al. having elements that interconnect two different protocols such CDMA and GSM. One of ordinary skill in the art would be motivated to do this to facilitate data transfer between the CDMA and GSM protocols for proper communication.

Naqvi et al. does not disclose a switch comprising the PDSN and SGSN elements together that interconnects CDMA and GSM infrastructure. Gorsuch discloses a terminal (Figure 6, element 615) that includes a subscriber unit (element 101) with a user who desires to communicate with a second site using a portable computer (element 110). The subscriber unit includes both a CDMA protocol converter (element 130) and a W-LAN protocol converter (element 230). At the time the invention was made it would have been obvious to a person of ordinary skill in the art to modify UTRAN and SGSN of Naqvi et al. to have a switch that contains both elements so as to interconnect two different protocols such CDMA and GSM. One of ordinary skill in the art would be motivated to do this for efficient facilitation of communication between different systems.

5. Claims 27-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. in view of Naqvi et al.

Wang et al. discloses all the limitations of the claims except for use of CDMA2000 1x and CDMA2000 3x. Naqvi et al. discloses the use third generation networks such as CDMA2000. See column 1, lines 19-21. At the time the invention was made it would have been obvious to use cdma2000 1x and cdma2000 3x in the modification of system Wang et al. with system Naqvi et al. One of ordinary skill in the art would be motivated to do so for greater voice capacity and speed.



*Conclusion*

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Behan US 6,442,401 discloses analyzing a packet radio cellular communications network such as GPRS.

Chang et al. US 6,487,406 disclose PCS-to-Mobile IP internetworking.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie Jagannathan whose telephone number is 703-305-8078. The examiner can normally be reached on Monday-Friday from 8:00 a.m.-4:30 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 703-308-5463. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9315 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Melanie Jagannathan  
Patent Examiner  
AU 2666

MJ *ms*  
May 2, 2003



D. JAGANNATHAN  
PATENT EXAMINER



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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
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